

## CLAIMS

1. A holographic recording medium comprising, in a substantially identical plane, a white-light reconstruction holographic recording layer region capable of forming a white-light reconstruction hologram, having a thickness of 2  $\mu\text{m}$  to 80  $\mu\text{m}$ , and a Fourier holographic recording layer region capable of multiplexed hologram recording, having a thickness of 100  $\mu\text{m}$  to 2 cm.

2. The holographic recording medium according to claim 1, wherein the white-light reconstruction holographic recording layer region is 3  $\mu\text{m}$  to 40  $\mu\text{m}$  thick, and the Fourier holographic recording layer region is 100  $\mu\text{m}$  to 5 mm thick.

3. A holographic recording medium comprising, in a substantially identical plane, a white-light reconstruction holographic recording layer region, at least in part of which a white-light reconstruction hologram is formed, having a thickness of 2  $\mu\text{m}$  to 80  $\mu\text{m}$ , and a Fourier holographic recording layer region, at least in part of which multiplexed holograms are recorded, having a thickness of 100  $\mu\text{m}$  to 2 cm.

4. The holographic recording medium according to claim 3, wherein the white-light reconstruction holographic recording layer region is 3  $\mu\text{m}$  to 40  $\mu\text{m}$  thick, and the Fourier holographic recording layer region is 100  $\mu\text{m}$  to 5 mm thick.

5. The holographic recording medium according to claim 3, wherein a hologram formed in the white-light reconstruction

holographic recording layer is a reflection hologram.

6. The holographic recording medium according to claim 4, wherein a hologram formed in the white-light reconstruction holographic recording layer is a reflection hologram.

5        7. A method of holographic recording comprising the step of irradiating, as an object beam, a two-dimensional pattern image created by a spatial light modulator to the white-light reconstruction holographic recording layer region in a holographic recording medium comprising, in a substantially identical plane, a white-light reconstruction holographic recording layer region capable of forming a white-light reconstruction hologram, having a thickness of 2  $\mu\text{m}$  to 80  $\mu\text{m}$ , and a Fourier holographic recording layer region capable of multiplexed hologram recording, having a thickness of 100  $\mu\text{m}$  to 15    2 cm.

8. The method of holographic recording according to claim 7, wherein the white-light reconstruction holographic recording layer region is 3  $\mu\text{m}$  to 40  $\mu\text{m}$  thick, and the Fourier holographic recording layer region is 100  $\mu\text{m}$  to 5 mm thick in 20    the holographic recording medium.

9. The method of holographic recording according to claim 7, wherein the object beam is modulated by the spatial light modulator, is switched to an optical path different from an optical path used for irradiating the two-dimensional pattern 25    image, is Fourier-transformed, and then is irradiated as an

information beam to the Fourier holographic recording layer region in the holographic recording medium.

10. The method of holographic recording according to claim 8, wherein the object beam is modulated by the spatial  
5 light modulator, is switched to an optical path different from an optical path used for irradiating the two-dimensional pattern image, is Fourier-transformed, and then is irradiated as an information beam to the Fourier holographic recording layer region in the holographic recording medium.

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